

species. I regret we have no specimen of Gould's *Hapalotis murinus* to compare with it.

The wood cuts show in—

Fig. 1. The pinna of the Ear.

„ 2. The under surface of the hand.

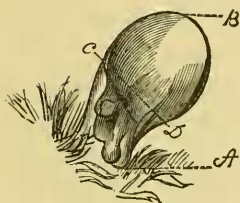
„ 3. The under surface of the foot.

(Type in the Macleay Museum.)

Fig. 1.

Fig. 2.

Fig. 3.



# PLANTS OF NEW SOUTH WALES—No. V.

By THE REV. DR. WOOLLS, D.D., F.L.S., &c.

We are now to review the *Monochlamydeæ*, including Sub-class III. and also the *Gymnospermæ*, Sub-class IV., which extend from Vol. V., p. 142, to Vol. VI., p. 255 of the *Flora Australiensis*, thus concluding the grand division of monocotyledonous plants. The species are not so numerous as those of the *Monopetalæ*, but the sub-classes are remarkable as containing plants with only one, or, in the case of the *Gymnospermæ*, without any floral envelope, amongst the former of which many of the *Proteaceæ* are peculiarly Australian. According to the species yet recorded for the three colonies, the following is the result, though there can be but

little doubt that the numbers for Queensland will be increased, as the scrubs are more carefully examined.

		Orders.		Genera.		Species.
Queensland	..	21	..	126	..	377
New South Wales		19	..	112	..	392
Victoria	..	16	..	61	..	197

It appears, so far as yet observed, that the *Paronychiaceæ* and *Cupuliferæ* do not extend to Queensland, no do the *Myristiceæ*, *Eleagnaceæ*, *Nepenthaceæ*, and *Balanophoreæ* to New South Wales, whilst Victoria is not only deficient of the last mentioned orders, but also of the *Piperaceæ*, *Aristolochiaceæ* and *Cycadeæ*. The species of *Proteaceæ* attain their maximum in New South Wales, being more than double the number recorded for Queensland or Victoria respectively ; but the *Amarantaceæ*, *Monimiaceæ*, *Laurineæ* *Thymeleæ*, *Euphorbiaceæ*, and *Urticeæ* are far more plentiful in Queensland, than in New South Wales or Victoria. One of the most important orders of this division is that of the *Chenopodiaceæ*, so highly prized in many parts of the interior for the plants called "Salt-bushes," including species of *Rhagodia*, *Atriplex*, *Kochia*, &c. The genera are nearly equal in the Eastern colonies but the species are more numerous in New South Wales. In his recent work on the "*Native Plants of Victoria*," Baron F. von Mueller, has described 49 species as indigenous in Victoria, whilst those of New South Wales are supposed to be nearly 70. Of the nine Australian genera of *Amarantaceæ*, 8 are represented in Queensland, 6 in New South Wales, and 4 in Victoria, whilst the species of *Polygonaceæ* are nearly equal in the three colonies. The Nutmeg family is limited to a solitary species in Queensland. Of the *Monimiaceæ*, *Doryphora sassafras* is peculiar to New South Wales ; *Atherosperma moschatum* is common to New South Wales, Victoria, and Tasmania ; and the species of *Mollinedia* and *Kibara* are for the most part limited to Queensland. Since the publication of Vol. V, of our *Flora*, flowering specimens of *Palmeria*

*racemosa* have been found at the Kurrajong, but specimens recently discovered near Bulli by the Rev. T. V. Alkin, M.A., seem to connect that species with the northern *P. scandens*. The only plants of the *Laurineæ* indigenous in Victoria are the leafless and parasitical *Cassythæ*, but the species of the order become more important in the Northern parts of New South Wales and Queensland, where they appear as trees and are known for their timber, as well as for their medicinal properties. There is a true Cinnamon in Northern Queensland (*Cinnamomum Tamala*),\* and according to the recent arrangement, the genus *Tetranthera* is now limited to Queensland, R. Brown's *T. dealbata* being referred to *Litsæa*.

Of the 29 genera of the *Proteaceæ*, 21 occur in Eastern Australia as *Adenanthos*, *Stirlingia*, *Synaphea*, *Franklandia*, *Bellendena*, *Agastachys*, *Cenarrhenes*, and *Dryandra*, are for the most part indigenous in Western Australia and Tasmania. The *Proteaceæ* are known principally in Australia and South Africa, but whilst species occur here and there in New Caledonia, the Oriental Archipelago, Asia, and Japan, *Guevina avellana*, or the Evergreen Hazel-tree of Chili, extends from middle Chili to Chonos Archipelagus (see Baron Mueller's "Select Extra-tropical plants"). This order is one of those which impresses a distinct feature on Australian Vegetation, and includes in its genera humble plants and trees of considerable size, some of which are valued for their timber, edible fruits, and industrial products. It is remarkable that the genus *Dryandra* with its 47 species is endemic in Western Australia, being similar in many respects to *Banksia*, but differing in having the flowers sessile in an involucre of numerous imbricate scale-like bracts. The *Thymeleæ* are represented by about 20 species in the three colonies; but, whilst in Victoria the *Euphorbiaceæ* number 22 species ("Plants of Victoria, F.v.M."),

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\*By a recent arrangement this plant is now connected with *Pherosphæra*, which some regard as a sub-genus of *Dacrydium*.

and in New South Wales between 60 and 70, those of Queensland are above 100. This order, indeed, is usually more abundant in tropical and semi-tropical countries, and it is found to diminish in numbers in more temperate regions, and very few ascending into alpine or cold climates (Bentham). All the large trees of the *Euphorbiaceæ* (with the exception of *Phyllanthus Ferdinandii* and *Claoxylon australe*) occur principally in the Northern parts of the Colony and in Queensland, amongst which the poisonous *Eccæcaria Agallocha* is the most to be dreaded on account of the injury which the juice does to the eyes. A similar remark, in reference to the size and number of the *Urticæ*, may be made as that already applied to the *Euphorbiaceæ*; for whilst in Victoria four genera are represented respectively by a single species (*Plants of Victoria*, F.v.M.), and New South Wales has scarcely 20 good species, the number in Queensland is nearly 50, including some trees of good size, as well as several gigantic species of *Ficus*. According to Baron Mueller *F. scabra* or *aspera*, extends through Eastern Australia and to Polynesia, whilst the Nettle-tree, in one form or other, occurs occasionally from Illawarra to Rockingham Bay.

The order *Casuarinææ*, which furnishes the trees popularly termed oaks, consists of a single genus, and the species do not exceed 7 in any of the Eastern Colonies. The occurrence of a Beech (*Fagus Moorei*) in New South Wales is remarkable, and, being closely allied to *F. Cunninghami*, it seems to form another link between the Flora of Australia and Tasmania. Of the *Santalaceæ*, the Quandong (*Fusanus acuminatus*) does not extend to Queensland, but the "Native Currant" (*Leptomeria acida*) and the "Native Cherry" (*Exocarpus cupressiformis*) are common to the three colonies. The Conifers of Australia consist of 11 genera and about 26 species, of which 4 only occur in Victoria, and 8 or 9 in New South Wales and Queensland. *Araucaria Cunninghami* and *A. Bidwillii*, *Dammara robusta*, and *Podocarpus elata* are splendid trees, limited for the most part to Queensland

and prized for the value of their timber. *Dacrydium Franklinii* which is a large tree rising from 60 to 100 feet, is peculiar to Tasmania, but Mr. R. D. Fitzgerald, F.L.S. has recently discovered that the genus is represented on the Blue Mountains by a small shrub described by Baron Mueller under the name of *D. Fitzgeraldi* (*Fragmenta*, Vol. II., p. 102). The discovery of this plant is highly interesting, as it affords an additional link between the Flora of Australia and New Zealand. The *Cycadeæ* of Australia are confined to three genera and seven species, all of which, with the exception of *Macrozamia Fraseri*, are found in Queensland. The order does not extend to Victoria.

Of the introduced plants of the Monochlamydeæ the following have been recorded :

<i>Phytolacca octandra</i> , (Linn.)	<i>Rumex acetosella</i> (Linn.)
<i>Chenopodium murale</i> , (Linn.)	<i>Polygonum aviculare</i> (Linn.)
„ <i>ambrosioides</i> (Linn.)	„ <i>orientale</i> (Linn.)
<i>Atriplex patula</i> (Linn.)	<i>Cuscuta epithymum</i> (Willd.)
<i>Amarantus paniculatus</i> , (Linn.)	<i>Euphorbia peplus</i> (Linn.)
„ <i>blitum</i> (Linn.)	<i>Ricinus communis</i> (Linn.)
„ <i>viridis</i> (Linn.)	<i>Urtica dioica</i> (Linn.)
<i>Rumex crispus</i> (Linn.)	„ <i>urens</i> (Linn.)
„ <i>conglomeratus</i> (Mur.)	<i>Cannabis sativa</i> (Willd.)

In concluding my review of the Dicotyledonous plants of New South Wales, it would appear that the indigenous species are nearly 2,000, whilst those which have been introduced accidentally are about 115. I am well aware that this estimate is far from being correct, and that the progress of cultivation is gradually encroaching on our native vegetation. Baron Mueller, in his admirable volume on “The Native Plants of Victoria,” omits any enumeration of introduced plants, because he remarks “not only would it be difficult to affirm, where the annually increasing number of these kind of hospitants or invaders or garden fugitives was to end in any enumeration of the vegetation of our prolific

clime, but the arbitrary admission of any of them would also disturb an unimpaired view over the purely native flora." Whilst, however, the Baron has designedly omitted this subject, we may gather from the volumes of the *Flora Australiensis*, (in which in conjunction with Mr. Bentham he has expressed his views in reference to many plants of doubtful origin,) a list of of the principal species unknown at Port Jackson in the early days of the colony. No one is better qualified than the Baron to form a correct opinion of the matter, or to give an approximate estimate of the plants peculiar to the Australian Colonies, for his personal researches in the field have extended over a considerable portion of the continent for thirty-four years. I hope, therefore, that when he has completed his survey of Victorian plants, he will discuss in an elaborate manner the topics which I have been briefly considering in these papers.

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#### POPULAR NOMENCLATURE.

BY THE REV. DR. WOOLLS, D.D., F.L.S.

People sometimes make themselves merry with Botanical names, and no doubt they have some reason for merriment, for, as Professor Lindley remarks, "It is full time, indeed, that some stop should be put to this torrent of savage sounds, when we find such words as *Calucechinus*, *Ovsigenesa*, *Finaustrina*, *Krascheninikovia*, *Gravenhorstia*, *Andrzejofskya*, &c., thrust into the records of Botany." Now in order to remedy this evil, the popular idea is to adopt short names in the vernacular, and to give up scientific names altogether. This seems very feasible to persons who have not considered the subject, for they forget that the popular names of one district are not those of another, and that unsatisfactory as some scientific names are, they are, nevertheless, necessary, for the world at large. Whilst, therefore, care should be taken to abbreviate and render euphonious the nomenclature of science,